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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CRAIG, DWIN M

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/975,030

Applicant(s)

SNYDER ET AL.

Examiner

Dwin M. Craig

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-26 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 1 and 4-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-23-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-26 have been presented for reconsideration based on Applicant's arguments.
2. The Examiner thanks the Applicants' for amending claim 1 and correcting a minor typographical error.

Response to Arguments

3. Applicants' arguments presented in the 7/19/2005 responses have been fully considered. The Examiner's response is as follows.

3.1 As regards the Applicants' persuasive arguments concerning the prior art rejections of claims 1-5, 7, 8, 10-12, 13 and 16 and more specifically and in regards to US Patent 5,964,893 *Cirello et al.* the Applicants' argued on page(s) 11 & 12, of the 7/19/2005 responses, "*Applicants respectfully assert that the rejection improperly equates Cirello's system that traces, e.g., records, execution of a device under test with the recited emulation device that "execute(s) instruction in lock-step with the DUT" as recited by Claim 1.*"

The Examiner has found this argument to be persuasive and withdraws the previously applied rejections of the claims.

- 3.2 An updated search has revealed new art.

Claim Objections

4. Claim 1 is objected to for the following reason; the Applicants' are claiming the following, "*a time dependent date transport portion*" the Examiner believes that the following is what the Applicants' intended to claim, "*a time dependent data transport portion*", amendment or clarification is requested.

Art Unit: 2123

4.1 Claim 5 is objected to for the following reason; the Applicants' are claiming the following, "*a first time dependent date line*" the Examiner believes that the following is what the Applicants' intended to claim, "*a first time dependent data line*", amendment or clarification is requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 3 and 5 are rejected under 35 USC § 102(b) as being anticipated by US Patent 5,371,878 Coker.

5.1 As regards independent claims 1 and 5 and using independent claim 1 as an example, the Coker reference discloses, *A communications interface for coupling a device (DUT) under test with an emulator device*, (Figure 1, the "TARGET SYSTEM" is the device under test and the emulator device is item 32 "ICE" *et seq.*), *the emulator device implementing the DUT and executing instructions in lock-step with the DUT*, (Col. 3 lines 6-16 *et seq.*), *the communication interface comprising; a time dependent data transport portion that communicates serialized data between the DUT and the emulator device*, (Figure 3 and Figure 5 item 26 and Col. 7 lines 53-65, *et seq.*) ; *and a time dependent portion data transport portion that communicates serialized data between the DUT and the emulator device*; (Figure 3 "INPUT DATA WORD" and Col. 7 lines 53-55 *et seq.*), *and a clock portion that supplies clock information to the DUT and the emulator device*; (Figure 3 "CLOCK LINE"), *wherein the time dependent data transport*

transports varying types of information depending upon a time phase of operation of the DUT and the emulator device. (Col. 6 line 8, “If, however, the generic input signal received from the interface translator 20 indicates a special data type, the special input data flag is set to one (1) and four bits of the input data word are reserved to indicate the type of special data.” *et seq.*

The Examiner asserts that this describes a “special” type of data that is then clocked in a new “time phase” as expressly claimed by the Applicants). As regards the limitation in independent claim 5 of having a microcontroller, the *Coker* reference discloses emulating the functional equivalent of a microcontroller (Figure 1 Item 12).

5.2 As regards dependent claims 2 and 3 the *Coker* reference discloses bi-directional data and a plurality of data lines (Figure 1 items 30 & 34).

Allowable Subject Matter

6. Claims 17-26 are allowed.

6.1 Dependent Claims 4 and 6-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6.2 Dependent claims 19, 22 and 23 are being objected to because independent claim 17 is rejected under the judicially created doctrine of non-statutory double patenting, there is not requirement that these claims be re-written in independent form, there is only a requirement that a terminal disclaimer be provided in regards to US Patent 6,922,821, *please see section 6 of this Office Action.*

Art Unit: 2123

6.3 The following is a statement of reasons for the indication of allowable subject matter: As regards Independent claim 17, the prior art neither anticipates nor makes obvious the following limitations, in combination with other limitations, *“a third interface line for use by the microcontroller to send I/O data to the ICE and to notify the ICE of pending interrupts; and”* in combination with, *“a forth interface line for bi-directional communication that is used by the microcontroller to send I/O data to the ICE, and that is used by the ICE to convey halt requests to the microcontroller”* and in further combination with, *“a first interface line carrying a system clock driven by the microcontroller, for driving the communication state machine forming a part of the virtual microcontroller”*.

6.4 The following is a statement of reasons for the indication of allowable subject matter: As regards Independent claim 26, the prior art neither anticipates nor makes obvious the following limitations, in combination with other limitations, *“a first interface line carrying a system clock driven by the microcontroller, for driving the communication state machines forming a part of the virtual microcontroller;”* in combination with *“wherein the interface lines are carried over a Category five cable.”*

6.5 Dependent claims 18-25 are allowed as they depend upon an allowed base claim.

Conclusion

7. This Office Action is Non-Final. Claims 1 and 4-16 are objected to. Claims 1, 2, 3, and 5 are rejected with prior art. Claims 17-26 are allowed.

Art Unit: 2123

7.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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